Notice of Allowability	Application No.	Applicant(s)	
	10/047,863	BERGMAN ET AL.	
	Examiner	Art Unit	
	Neveen Abel-Jalil	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *January 14, 2005*.

2. ☒ The allowed claim(s) is/are *1,5-8,10 and 12-15*.

3. ☒ The drawings filed on *16 January 2002* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

C. Rones

CHARLES RONES
PRIMARY EXAMINER

Claim 15. (Currently Amended) An apparatus for sensing parameters and for controlling the transfer of data representing such sensed parameters, the apparatus having limited data computation and storage capability and being located remotely from a base computing station having substantially greater data computation and storage capability, the apparatus comprising:

a data acquisition controller which controls the operation of one or more physical parameter sensors and stores acquired data in progressive data representation format;

a data transmitter which transmits data representing parameters sensed by the one or more parameter sensors to the base station;

an in-situ progressive decision support module which directs the data acquisition controller to obtain data representing one or more physical parameters determined to have relatively highest utility to a decision maker given processing constraints of the control apparatus, and which assigns a transmission priority to such data in its progressive representation format and directs the data transmitter to transmit such data to the base station given the assigned priority, the in-situ progressive decision support model including means for receiving feedback from the base station to adjust the relative utility of data describing physical parameters ~~for use~~ usable in subsequent data sensing and transmission;

wherein the in-situ progressive decision support module makes use of a model describing a condition of interest to a decision maker, the model including one or more parameters measurable by the parameter data sensor; and

wherein the in-situ progressive decision support module determines parameters for which data is to be gathered by taking the first order derivative of the model and ranking the result.

Reasons for Allowance

5. Claims 1, 5-8, 10, and 12-15 are allowed over the prior art made of record.

6. The following is a statement of reasons for allowance:

The prior art of record (Horton et al. -U.S. Patent No. 6,421,622) does not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim), an in-situ progressive decision support module which directs the data acquisition controller to obtain data representing one or more physical parameters determined to have relatively highest utility to a decision maker given processing constraints of the control apparatus, and which assigns a transmission priority to such data in its progressive representation format and directs the data transmitter to transmit such data to the base station given the assigned priority... wherein the in-situ progressive decision support module determines parameters for which data is to be gathered by taking the first order derivative of the model and ranking the result, as claimed in Independent claim 1.

Dependent claims 5-7, 10, and 12-14 being further limiting to the Independent claim 1, therefore, also allowed.

The prior art of record (Horton et al. -U.S. Patent No. 6,421,622) does not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim), directing the data acquisition controller to sense data describing one or more physical parameters determined to have relatively highest utility; assigning a transmission priority to the sensed data; directing the data transmitter to transmit the sensed data to the base station given the assigned priority... wherein the in-situ progressive decision support module determines parameters for which data is to be gathered by taking the first order derivative of the model and ranking the result, as claimed in Independent claim 8.

The prior art of record (Horton et al. -U.S. Patent No. 6,421,622) does not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim), an in-situ progressive decision support module which directs the data acquisition controller to obtain data representing one or more physical parameters determined to have relatively highest utility to a decision maker given processing constraints of the control apparatus, and which assigns a transmission priority to such data in its progressive representation format and directs the data transmitter to transmit such data to the base station given the assigned priority... wherein the in-situ progressive decision support module determines parameters for which data is to be gathered by taking the first order derivative of the model and ranking the result, as claimed in Independent claim 15.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 571-272-4074. The examiner can normally be reached on 8:30AM-5:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Neveen Abel-Jalil
July 10, 2006

CHARLES RONES
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

Remarks

1. In Response to the amendment filed on 14-January-2005, claims 2-4, 9, and 11 have been cancelled. Claims 1, 5-8, 10, and 12-15 are now pending in the application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Ido Tuchman (Attorney of Record) on July 10, 2006.

Please amend the above-identified application as follows:

3. IN THE SPECIFICATION:

Please amend paragraph 0001 of the specification as follows (a marked-up copy of the changes made to the specification can be found in Appendix A below):

[0001] This application claims the benefit of U.S. Provisional Patent Application Serial Nos. 60/263,026 and 60/263,039, each filed Jan. 19, 2001, and each of which is incorporated herein by reference. This application is related to U.S. Patent No. 6915239, filed contemporaneously herewith and incorporated herein by reference.

4. IN THE CLAIMS:

Please amend the claims as follows:

Claim 1. (Currently Amended) An apparatus for sensing parameters and for controlling the transfer of data representing such sensed parameters, the apparatus having limited data computation and storage capability and being located remotely from a base computing station having substantially greater data computation and storage capability, the apparatus comprising:

a data acquisition controller which controls the operation of one or more physical parameter sensors and stores acquired data in progressive data representation format;

a data transmitter which transmits data representing parameters sensed by the one or more parameter sensors to the base station;

an in-situ progressive decision support module which directs the data acquisition controller to obtain data representing one or more physical parameters determined to have relatively highest utility to a decision maker given processing constraints of the control apparatus, and which assigns a transmission priority to such data in ~~its~~ progressive data representation format and directs the data transmitter to transmit such data to the base station given the assigned priority, the in-situ progressive decision support model including means for receiving feedback from the base station to adjust the relative utility of data describing physical

parameters ~~for use~~ usable in subsequent data sensing and transmission;

wherein the in-situ progressive decision support module makes use of a model describing a condition of interest to a decision maker, the model including one or more measurable by the parameter data sensor;

wherein the model having one or more variables representing measurable parameters; and

wherein the in-situ progressive decision support module determines parameters for which data is to be gathered by taking the first order derivative of the model and ranking the result.

Claims 2-4 (canceled)

Claim 5. (previously presented) The apparatus of claim 1, wherein the in-situ progressive decision support module assigns a transmission priority to gathered data by taking the first order derivative of the model and ranking the result.

Claim 6. (previously presented) The apparatus of claim 1, where the model is a linear regression model whose one or more variables are associated with weights indicating the relative utility of the parameter to the decision maker.

Claim 7. (original) The apparatus of claim 6, wherein the apparatus further comprises:

means responsive to the feedback received from the base station for modifying the weights associated with measurable parameters;

means for directing the data acquisition controller to cause further parameter

data to be gathered, the further parameter data to be gathered being dependent on changes in utility of such parameter data as indicated by the modified weights; and

means for assigning a modified transmission priority to such further parameter data and directing the data transmitter to transmit such parameter data to the base station given the modified transmission priority, the modified transmission priority being dependent on changes in utility of such parameter data as indicated by the modified weights.

Claim 8. (Currently Amended) A method ~~for use~~ usable in an apparatus for sensing parameters and controlling the transfer of data representing such sensed parameters, the apparatus having limited data computation and storage capability, located remotely from a base computing station having substantially greater data computation and storage capability, the ~~transmission control~~ apparatus including a data acquisition controller which controls the operation of one or more physical parameter sensors and a data transmitter which transmits data representing parameters sensed by the one or more parameter sensors to the base station, the method comprising:

determining an initial relative utility of parameter data from the physical parameter sensors that ~~can be~~ is sensed by the apparatus;

directing the data acquisition controller to sense data describing one or more physical parameters determined to have relatively highest utility;

assigning a transmission priority to the sensed data;

directing the data transmitter to transmit the sensed data to the base station

given the assigned priority;

determining, in response to feedback from the base station, a subsequent relative utility of parameter data ~~for use~~ usable in subsequent data sensing and transmission; and

wherein the determination of an initial relative utility of parameter data is based on a model describing the utility of such data to a decision maker; and

wherein the determination of an initial relative utility is performed by taking the first order derivative of the model and ranking the result; and

transmitting by the data transmitter subsequent sensed data describing the one or more physical parameters according to the subsequent relative utility.

Claim 9. (canceled)

Claim 10. (previously presented) The method of claim 1, wherein the model comprises one or more variables representing measurable parameters.

Claim 11. (canceled)

Claim 12. (previously presented) The method of claim 10, wherein transmission priority is determined by taking the first order derivative of the model and ranking the result.

Claim 13. (previously presented) The apparatus of claim 10, where the model is a linear regression model whose one or more variables are associated with weights indicating the relative utility of the parameter to the decision maker.

Claim 14. (original) The method of claim 13, further comprising:

modifying, in response to the feedback received from the base station, the weights associated with measurable parameters,

directing the data acquisition controller to cause further parameter data to be sensed, the further parameter data to be sensed being dependent on changes in utility of such parameter data as indicated by the modified weights; and

assigning a modified transmission priority to such further sensed data and directing the data transmitter to transmit such parameter data to the base station given the modified priority, the modified transmission priority being dependent on changes in utility of such parameter data as indicated by the modified weights.